


REPORT
OF THE
MEDICAL OFFICER OF HEALTH
TO THE
GLOUCESTER
Urban Sanitary Authority

FOR 1896.



ORDERED TO BE PRINTED.

JOHN JENNINGS, GLOUCESTER.



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REPORT.

*To the Chairman and Members of the Sanitary Committee
of the Gloucester Urban Sanitary Authority.*

GENTLEMEN,

I have the honour to present to you my Annual Report for the year 1896, and in doing so, I am sorry to say that the city has during the past year experienced a most severe epidemic of Small Pox, which has done incalculable harm in a commercial point of view, and, worse than all, it has caused untold suffering to a large section of the community, and the loss of many lives.

In the remarks that I shall here make in connection with this subject, I hope it will be understood that I do not wish in any way to contribute to the controversy as between Vaccinators, on the one hand, and Anti-Vaccinators on the other. It is my duty, as Medical Officer and Medical Adviser to the Urban Authority, to point out and, if possible, remove any cause which is in my opinion

likely to be detrimental to the health of the inhabitants, and if statements are here made which do not coincide with the views of some members of the committee, I trust they will be considered as statements made in the exercise of a public duty, and in no way offensive to anyone.

I regret exceedingly that a death-rate which would otherwise have been extremely low, one of the lowest on record in this city, should be converted into a high one, solely on account of the Small Pox mortality.

A rather severe visitation of Measles has occurred during the latter months of the year, causing a rather marked mortality among very young children. This disease has been prevalent in the surrounding towns, and when the very insidious nature of Measles is taken into account it is not to be wondered at that we should be visited by it when there has been so much of it around us. There have also been a good few cases of Diphtheria in the same time, but this disease has been quite prevalent everywhere almost, during 1896, and though the exact *cause* of it has not at present been determined, this much appears to be fairly established, namely, that Diphtheria is more a disease of climatic origin than one caused by bad drainage or insanitary surroundings.

Notwithstanding the occurrence of the two last-named diseases, still our death-rate would have been extremely low if there had not been Small Pox.

As I intend to write a special Small Pox Report after this one is finished, I shall not give minute details regarding that disease here, but the salient points must not be lost sight of.

In my Report for the year 1895 I stated that up to the end of that year there had been twenty-six cases of Small Pox recorded. I said that owing to the very unprotected condition of the population as regards vaccination I feared that a serious epidemic was about to commence. That opinion was most unfortunately verified.

I presume there are few people at the present time in England (who trouble themselves to read and think) but are convinced that, whatever other objections there may be to the practice, vaccination is a preventative of Small Pox, and that an unvaccinated community is in great danger of an outbreak at any time.

That is precisely what occurred in Gloucester towards the end of 1895. I estimate roughly that twelve thousand children, or nearly so, were unvaccinated at the time of the outbreak, and two of those untoward circumstances that may occur at any time, with such a condition of things, brought on this epidemic.

The first case occurred in Midland Road, and was concealed, no medical man being sent for, and it was not till several persons had contracted the disease in this house that we became aware there was anything the matter, even then, the most

emphatic statement was made that no such disease had been in the family, and it was months afterwards that the tenant reluctantly acknowledged the case was one of Small Pox.

The other was the case in Derby Road, which was mistaken by the medical man called in as a case of Measles, and as this disease is not notifiable in this city the authorities were equally in the dark about it.

I consider that these cases were the real cause of the epidemic, occurring in a community quite unprotected by vaccination.

A great deal has been said about the alleged insanitary condition of the city, and statements have been made to the effect that this was really the cause of the epidemic. I have no hesitation in characterising these statements as perfectly untrue.

In the first place, it is well known to all experts on this subject that the Exanthemata, *e.g.*, Small Pox, Scarlet Fever, and the others, are not produced *prima facie* by any of these causes, but are communicated by persons to others, and that in this way alone the disease is spread. In the second place, the parts of the city least affected by Small Pox were just the parts where it ought to have prevailed if any such cause as that alleged had anything to do with it. The lower parts of the Westgate, and the surrounding districts, and the Foundry district, but more particularly the former,

ought according to that theory to have been visited the most instead of being the parts least affected. The worst houses from a sanitary point of view are to be found here : old, badly-drained premises, with the very circumstances to determine such an outbreak. While the district affected consists mainly of new streets, with good houses, and not at all crowded.

Then overcrowding is always an important fact in dissemination of Small Pox, but what do we find on examination, that whereas the district affected has only 31·97 persons to an acre, the non-affected district has, part of it, 65 persons to an acre.

In the third place, the diseases produced by bad drainage are conspicuous by their absence: only two cases of death by Typhoid having occurred in the whole city during the year; and only thirteen cases of Diarrhœa, ten of them in infants. These are the diseases caused by bad drainage.

VITAL STATISTICS.

I estimate the population of Gloucester to have been at the end of 1896, 40,865,—this I think is not an over estimate, as it only allows an increase of 296 during the year.

There were, including Small Pox, 1,075 deaths, which will give the high death-rate of 26·30 per

thousand, but if we exclude the Small Pox deaths we get a very low death-rate, when it is considered that the population is that of a manufacturing city, which has always a high infants' mortality. The death-rate, then, exclusive of Small Pox, is only 15·80, which is lower than for many years except 1894, which had a remarkably low death-rate all over England.

This death-rate would show that the city, exclusive of Small Pox, was a very healthy one, and had there not been 52 deaths from Measles, which is another of the exanthemata, and an accidental visitant, so to speak, our death-rate would have been the lowest on record here.

And now let us turn from the city, as a whole, to its several divisions.

For some years now I have divided the city into four districts, namely, the four sub-registration divisions. This will enable one to localise disease and death, and the causes of such, better than treating the city as whole. I have also for a year or two disregarded public institutions altogether as separate districts, and have adopted what I consider a better plan, namely, to ascertain the previous homes of all people who have been inmates of these institutions during the year, and allocate them to their own districts. In this way I consider I am able more accurately to give a local death-rate ; indeed, were this plan not adopted it would be impossible to estimate properly the healthiness,

or the contrary, of the different districts. A reference to the coloured map at the end of this Report will clearly show the several divisions I have referred to. It will also be seen that the anomalous position of Kingsholm is one not of my making, but is rather the result of the registration arrangement of the city. Kingsholm, then, must be understood to be not what we usually call Kingsholm, which is really composed of part of the Saint Nicholas and part of the Saint John's sub-registration districts.

This Kingsholm sub-registration district is really bounded on the north by the south-east side of London Road, and on the other sides by a line drawn along from London Road, near the Spread Eagle Hotel, on through by Windmill Road to the Chequers Bridge, including Twyver Street, Sidney Street, and others in that locality, then on from Chequers Bridge, along the city boundary to the bottom of Wotton pitch.

Let us then analyse the different divisions, and first of all *South Hamlet*, the division principally affected by Small Pox, and which we will call No. I.

The population of this district I estimate at 22,384, and as there were 738 deaths, the death-rate, including Small Pox, reached 32·96 per thousand, but without Small Pox the rate was 15·81, or nearly equal to the rate in the whole city without Small Pox.

This fact ought not to be lost sight of, as this is the district accused of being insanitary ; and it will

be seen that the death-rate would have been very low had we not had the Small Pox visitation. I will mention another circumstance when treating of the birth-rate in this district which is instructive.

The *St. Nicholas* district, which we will call No. II., was, of course, very little troubled with Small Pox, therefore the inclusive death-rate is very low, namely, 17·10; while without that disease the rate was only 15·26.

St. John the Baptist, which we will call No. III., was, like *St. Nicholas*, very slightly affected with the epidemic, therefore the death-rate here is also very low, only 16·87 with Small Pox, and 14·79 without that disease.

The *Kingsholm* district, which we will call No. IV., was rather severely affected, it includes Twyver Street, part of Millbrook Street, Sidney Street, and others that were severely stricken with the disease. The inclusive death-rate here was 25·54, and the exclusive one 20·36 per thousand.

There were 1235 births during the year, or a rate for the whole city of 30·22, this is rather smaller than the year 1895, but larger than in 1894.

In No. I. the birth-rate was 32·65; in No. II. the birth-rate was 28·55; in No. III. the birth-rate was 22·12; and in No. IV., the birth-rate was 39·24 per thousand.

It will thus be seen that in No. I. and No. IV. where the birth-rate was high, the Small Pox luxuriated,

while in No. II. and No. III., where the birth-rate was low, the disease did not get a footing.

The infant mortality of infants under one year is 163·56 per thousand born. This is lower than in 1895, but slightly higher than in the three preceding years. If we proceed to the different divisions we find that in No. I. the infant mortality was 186·04 per thousand; in No. II., 105·99; in No. III., 187·29; while in No. IV. the infant mortality was 84·90 per thousand born.

The Zymotic death-rate is 13·26 for the whole city, including Small Pox, while exclusive of that disease it is 2·76.

In the several divisions the Zymotic death-rate is as follows:—No. I. 20·32 including Small Pox, and 3·17 without; in No. II. it was 3·94 inclusive of Small Pox, and 2·10 without; No. III. had a rate of 4·40 with Small Pox, and 2·32 without; No. IV. had a rate of 7·77 including Small Pox, and one of 2·59 without that disease.

There is no doubt that a sharp outburst of Measles, which occurred during the latter months of the year, very greatly increased the Zymotic death-rate. This was not confined to one district but affected the whole city, although it was more prevalent in South Hamlet than in any other part.

I may as well give here the acreage and density of population of the city and its several divisions:—

The acreage of the whole is 1442, with a density of population of 28·34.

In No. I. the acreage is 700, the density being 31·97; No. II. has an acreage of 351, with a density of 21·65; No. III. has an acreage of 126, with a density of 65; and No. IV. has an acreage of 265, with a density of 10·2 persons to an acre.

SANITARY WORK.

During the past few years a large amount of sanitary work has been done, a large proportion having been accomplished without the intervention of the Sanitary Committee, for the inhabitants are now becoming aware of the fact, that unless the sanitary defects are attended to on notice, we will persist in following them up till the work is done. So that, whereas some years ago one might send them notice after notice without the slightest effect, now one such notice is often sufficient to get the work done.

During the eight months of the epidemic this work had to be to a great extent put on one side, but since that has disappeared we have been very busy again, and we are now making a complete survey of the city by a house-to-house inspection, keeping an accurate record of the condition of every house. Of course during this survey any defects that are found are remedied as quickly as possible.

In proceeding to give a detailed account of this work during 1896 it is almost impossible to estimate the amount done that cannot well be put upon paper, but some idea may be formed from the following tabulated statement, for part of which I am indebted to Mr. Read, as some of our work is intermingled with that of his department, such as fitting of flushing boxes, water supply, and the like.

1896.

Houses built during the year	175
Shops ditto	3
Factory built	1
Warehouse built	1
Mission Hall built	1
Stables, Workshops, and Sheds built	21
Premises re-built	4
Alterations made	40
Total	<u>244</u>

WATER SUPPLY.

Houses supplied with City Water and provided with Flushing Boxes at end of 1895	8747
Houses connected with City Water and provided with Flushing Boxes to W.C.'s during 1896	234
Flushing Boxes fixed to houses where City Water was already laid on	5
Total number of houses with Flushing Boxes	<u>8986</u>
Houses still without Flushing Boxes but supplied with City Water	104
Total number of houses with City Water	<u>9090</u>
Houses supplied with City Water and provided with Flushing Boxes at the end of 1896	8986
Houses with City Water without Flushing Boxes	104
Houses supplied with Pump Water	75
Houses supplied with Lysons' Water	141
	<u>320</u>
Total number of Dwelling Houses in City	<u>9306</u>

Before proceeding with an account of the other sanitary work it may be as well to make some remarks about the tabulated statement here given. It will be seen that year by year a more satisfactory state of things is shown. The number of houses supplied with city water is steadily increasing, as well as the number of flush boxes supplied. While the number of houses supplied with well water is decreasing, so that at the end of the year only 75 houses were thus supplied. This is surely a very satisfactory state of things, as, when I was appointed Medical Officer in 1889, there were no less than 944 houses deriving their water supply from wells, all more or less polluted.

I am pleased that Lysons's water is about to be cut off, so that soon we shall find all the houses in the city supplied with city water, and, I hope, with flushing boxes to their closets.

I shall have to recur to this subject presently, when treating on the water supply and sewerage.

Meanwhile I will continue a statement of the work done during the year.

Ordinary General Inspections	...	...	...	...	4341
Visits to Houses, <i>re</i> Infectious Diseases	...	...	...	...	2168
House-to-House Inspections	...	...	...	...	772
Houses cleaned and lime-washed on notice	...	...	...	...	1325
Houses fumigated and disinfected by staff	...	...	...	...	1868
Goods from Houses burnt (Houses)	...	...	...	...	60
Goods from Houses disinfected by steam (Houses)	...	...	...	...	1824
Removing soil pipes from inside to outside of Houses	...	...	...	...	5
Removing open gulleys from inside to outside of Houses	...	...	...	...	45
Stopped drains cleared	...	...	...	...	73
New drains added	...	...	...	...	3

New w.c.'s built complete	...	...	...	...	...	7
Flush-boxes repaired	...	..	...	...	...	65
New pans and traps to w.c.'s	...	...	...	..	...	33
New urinals fixed	...	..	...	...	...	2
Notices served under Inspector's signature...	...	...	...	...	...	363
Notices served on Authority of Committee, Town Clerk's signature	...	...	...	...	...	126
Rain-water, sink and other waste pipes disconnected from drains	...	...	...	...	...	37
W.c.'s cleaned or repaired	...	..	...	...	...	28
W.c.'s unstopped and closet pans cleaned	...	...	...	...	...	27
Complaints received and attended to	...	...	...	...	...	22
Visits to Slaughter Houses	...	...	...	...	...	18
,, Common Lodging Houses	...	...	...	...	...	56
,, Cow-sheds, Dairies, &c.	...	...	..	...	...	52
,, Bakehouses	..	...	...	...	...	17
,, Workshops	...	...	...	...	...	60
Nuisances from overcrowding abated	...	...	...	...	...	7
,, ,, Animals ditto	...	...	..	...	...	18
,, ,, Smoke ditto	...	...	...	...	...	1
House walls repaired	...	...	...	...	..	20
Roofs, eaves and gutters repaired	...	...	...	...	...	8
Floors, yards, and areas repitched	...	..	...	...	...	28
Accumulation of manure removed	..	...	...	...	...	4

Remarking upon the foregoing, I may say, that where any serious defects have to be made good the Inspector has to supervise the work, such for instance as that of laying new drains, relaying or altering old ones, and the like. Efforts have been directed very particularly to the provision of flush-boxes where none existed; to the increase of w.c. accommodation, the closing of houses unfit for human habitation, and over-crowding of dwellings; and I am glad to find that over-crowding is being remedied to a large extent by a spreading out, as it were, of the population. This is shown by the fact

that though the number of people living in Gloucester but slowly increases, yet new districts are constantly being built upon by a good class of house.

Before leaving this subject I may give a few particulars regarding the drainage,—these have been kindly given me by Mr. Read.

The older portion of the city was sewered in 1852. The city was enlarged to its present boundary in 1875, the sewers being extended by Mr. James Mansergh, C.E., to cover the additional area. The city is sewered upon three main lines—the Northern, the Central and the Southern, discharging into the River Severn.

The northern out-fall sewer is 3,433 yards in length and has a fall of 57·60 feet in the distance, or an average gradient of 1 in 178. It commences with a 9-inch pipe at Chequers Bridge and discharges into the river by a brick culvert, 4 feet 6 inches by 3 feet, at the Quay.

The central outfall sewer is 3,000 yards in length, and has a fall of 43 feet in that distance, or an average gradient of 1 in 209. It commences in Adelaide Street with a 9-inch pipe and discharges into the river by a brick culvert, 4 feet 6 inches by 3 feet, alongside the northern sewer at the Quay.

The southern outfall sewer is 2,760 yards in length, and has a fall of 47·26 feet, or an average gradient of 1 in 175. It commences with a 9-inch

pipe in the Stroud Road, and running in a westerly direction, eventually enters an old culvert which passes along the canal bank and crosses under the canal by a syphon; from thence it traverses open fields and osier beds for a distance of 650 yards, and discharges into the river below the Llanthony weir at low-water mark.

The three lines of sewerage practically follow the valley lines of the three natural watercourses—the Twyver, the Sudbrook and the Tweenbrook, which originally traversed the city.

Previous to 1886, when the new Quay wall was built, the northern and central sewers had only one outlet, 4 feet 6 inches by 3 feet, this being again reduced below low-water mark to an iron pipe 30 inches diameter, and the opportunity was taken when rebuilding the wall to give each of the sewers a separate outlet 4 feet 6 inches by 3 feet.

Previous to 1875, the districts which were then added to the city were in charge of three local boards, who had an elaborate system of shallow brick culverts varying from 18 inches to 2 feet 6 inches diameter, laid along old ditches and draining into the Twyver and Sudbrook respectively. Most of these were laid in the back gardens of the houses, and in laying in the new sewage system in 1875 these had to be temporarily connected wherever they were crossed. The consequence was that the street manholes and ventilators then introduced on the new sewers became the outlets for the smells

generated in the old culverts, and consequently the manholes got a reputation which did not leave them ; and it was not until 1885 that the last of these old culverts was done away with, when a marked improvement immediately resulted.

Since then nearly 600 ventilating shafts have been put up, as permission could be obtained, and the smells from the manholes have been reduced to a minimum, only a small percentage of them creating a nuisance under certain conditions of the atmosphere.

The system here adopted for ventilating the sewers is by manholes opening at the level of the street, and where permission is given by owners, 4-inch shafts are attached which run up the side of the houses above the roof. Many people consider that this is not the best system, and other plans are tried in some towns. Bristol has no open manholes in the streets, other towns have the street openings but no shaft placed against the houses, and instead have openings or shafts at the extreme end of the particular sewer. I cannot think that any other system offers better prospect of success than our own.

If the manholes were closed or done away with there would certainly be a great danger that the safety syphon on the house drain would be forced by pent-up sewer gas, and thus get into the houses. No trap nor syphon is altogether to be depended on, and it is only by providing for such a contingency that a fair amount of safety can be secured.

No doubt manholes are sometimes very offensive, but as private house drains are more and more improved, both by the universal use of flush boxes, clean closets, and a through current to keep the drain free from pent-up emanations, the offensive smells from the sewers will become less and less. Gloucester is an old city, and many of the defects inherent in such have been discovered, and are gradually being removed.

WATER SUPPLY.

For some years past it has been apparent that the water supply of the city was inadequate to the increase of the population, also to the great increase of houses, and the more general use of flush boxes in lieu of other methods of carrying the contents of closets away. A scheme has therefore been adopted which promises to be of lasting benefit to the city, and to render a scarcity of water almost an impossibility.

Gloucester is now provided with the Witcombe supply, the Robinswood Hill supply and the Newent supply.

The Hempstead supply to about 140 houses is about to be cut off; but there are still 75 houses supplied with pumps, and we hope to get rid of those in a short time.

The Witcombe water consists in a large measure of spring water thrown out from the adjoining Hills, and in addition the surface water collected over an area of 1500 acres. The water collected in this district falls into No. 1, or upper pool, by several streams which pass through rough filter beds before entering the reservoir. From this pool the water is allowed to descend into two other pools, and in each of the two latter is a means of allowing the water to pass to the city. One is provided with a decanting tower, allowing the valves to be opened from above downwards as the water sinks, the other is provided with wire screens through which the water has to pass in entering the main pipe.

A great deal has been done of late years to improve the Witcombe water, such as the diversion of certain impurities, and the cleaning out of the pools (a most important matter).

Robinswood Hill water is contained in two reservoirs and is decanted and filtered through rough gravel before passing on to the city; it is collected in the inferior oolite and mitford sand forming a gathering ground for the springs thrown out by the lias clay below. These springs are collected by conduits running round the contour lines of the hill and discharged into the upper reservoir.

The pools have been very much improved of late by cleaning and concreting the bottom.

The Newent water, upon which dependence will be placed should the other supply become seriously

diminished from any cause, is an excellent water. It is derived from the “water-stones” of the new red sandstone, at a point where the whole of the water-bearing stratum seems to give the best prospect of a permanent supply, and promises to afford more than the required quantity for many years to come. It is collected in a well 170 feet deep, and 12 feet in diameter, and is then pumped to a covered reservoir on Madam’s Wood Hill, from which it flows to the city by gravitation.

This water is very pure, and the only fault to be found with it is its hardness. Of course, when mixed with the other supply in the city much of this fault will be remedied by dilution; but to make an ideal water of it a means of softening, such as Clark’s process, or a modification thereof, would be desirable.

Taking the water supply, as a whole, I think this water will compare favourably with the best of the water supplies in the kingdom. The quantity is ample to provide 30 gallons a day per individual, and for manufacturing purposes as well, besides leaving a margin for other uses.

VACCINATION.

I must not omit to say a word on the subject of vaccination, which formed a topic for a great deal of controversy during the year. I simply desire to state facts regarding the subject, however. At the beginning of the year, something like 10,000 children must have remained un-vaccinated in the city, and as Small Pox got a hold among them it produced dreadful havoc, causing a very high mortality. When the epidemic assumed alarming proportions, however, such a scare was created that the house of every medical man was thronged with persons eager to have their children and also themselves vaccinated; this continued right through, and I think at least three-fourths of the inhabitants are now either vaccinated or re-vaccinated. Great efforts were likewise made by the Sanitary Committee to further vaccination and re-vaccination, and I consider that they deserve a great deal of praise for their efforts in this direction. The Guardians, through whose neglect it became possible to have an epidemic, moved very slowly at first, and it was not till urged on by the Sanitary Committee and the Local Government Board that they really began to move energetically in this matter. The statistics of the epidemic, which I will give in my special Report, will prove clearly the beneficial effects of vaccination; and the rapidity with which the disease disappeared after the people were, in a large proportion protected by it, is a very strong proof in its favour.

COMMON LODGING-HOUSES.

During the epidemic a strict watch was kept upon common lodging-houses, as they are more likely to spread disease both inside the city and outside unless very strictly watched. In only one such house was Small Pox found, and the cases were at once removed, the goods disinfected, and the house quarantined and disinfected. These houses are most carefully watched at all times and are regularly visited twice a week, and the bye-laws strictly enforced.

HOUSES LET IN LODGINGS

Have also received attention, and one notorious house of that description has been closed, another will, I hope, share the same fate, as I intend to hand in a certificate that it is not fit for human habitation. I am glad that we have an excellent set of bye-laws which enables us to deal with these houses, which are, in my opinion, a much greater pest than common lodging-houses.

FACTORIES AND WORKSHOPS.

These have received a good deal of attention during the year, and several factories, where the sanitary appliances were defective, have been provided with these, and are now in a satisfactory condition. As regards workshops, we have not been able to measure each, and affix cards to each room, as I would wish. I intend, however, to get

this done forthwith, as I consider it a most important matter, these places requiring really more supervision than factories.

DAIRIES, COWSHEDS AND MILKSHOPS.

There are no Cowsheds in the city, but the Dairies and Milkshops have been frequently visited and found satisfactory.

The excellent additional powers conferred by our recent Gloucester Corporation Act enables us to deal with the milk supply.

BAKEHOUSES

Have been frequently inspected, and though a thorough inspection of these was made in 1895, and a great deal of needful sanitary work done, still so obstinate are owners of this class of property that something still remains to be done.

I consider that it would be a very good thing to have cards sent to tenants of Bakehouses, Slaughter Houses, and other places of the kind, calling attention to the requirements of the law as regards the keeping such places in a proper state. One sees the places without the six-monthly coating of hot lime-wash, and other defects, whereas if cards were affixed, calling attention to these matters, there would not be so much neglect observable.

SLAUGHTER-HOUSES.

Besides the newer and licensed Slaughter-houses a number of old places have been used as Slaughter-houses that have no right to be so used. A

regular inspection has been made during the year, and we have endeavoured to induce owners to keep them as clean and orderly as possible, but there are great difficulties, as we have not the same power over the old houses as over those that require a licence, which can of course be withdrawn if there is anything serious the matter. Several persons have attempted to slaughter in places without a licence, but have been cautioned, and have promised to discontinue the practice.

FOOD AND DRUGS ACT.

Less work has been done in the matter of food analysis during the year on account of the epidemic, and therefore any account of such action will form but an insignificant record when compared with the previous two years ; during 1897, however, we hope to do much more in this direction. The meat brought into the market during the year has been exceptionally good, and in only one case was there a suspicion of bad meat. Shops exposing foreign meat, though frequently examined, showed the quality to be above the average.

No samples of Food or Drugs analysed showed any adulteration, and no prosecutions under these Acts took place.

The following samples were taken and analysed : milk 25, butter 10, lard 3, mustard 1, pepper 1.

Now that our Sanitary Staff has been augmented, I intend to make a special effort in connection with the Food and Drugs Acts in the future.

ZYMOTIC DISEASES IN 1896.

Unfortunately one Zymotic disease prevailed to an alarming extent, namely,

SMALL POX.

I have already said a good deal about this disease, but it is necessary that I should give some statistics. I have told you how, by two untoward events, the match was set ablaze, how it spread under other unfortunate circumstances, and how, after raging in a phenomenal manner it ceased as phenomenally. I have also given you in tabular form some account of work done by our staff in connection therewith, though anything put upon paper can give no adequate account of the work done, not only by myself and staff, but by the Chairman and every Member of the Sanitary Committee, and history will not, I fear, record any of the self-denying efforts, in the face of enormous difficulties, undergone by both the Sanitary Committee and every official connected with the Corporation, as well outside the actual sanitary department as inside it. To Mr. Blakeway and his clerks, to Mr. Read, Mr. Weaver and their staff, and Mr. Ravenhill, and to Mr. Clutterbuck and his clerks are due, I think, every thanks and praise for the great trouble they took, and the untiring anxiety they showed in connection with the epidemic.

It would be useless for me to enter largely into detail on the subject of this visitation, that will be found in my special Report, but I think it would be

instructive to give an account of the cases in tabular form, which I now give you.

I will vouch for the correctness of the figures as far as human efforts can elucidate a very difficult subject: difficult from the nature of the disease; difficult on account of the trouble of getting at vaccination statistics; and difficult because of the reluctance of the people to record the fact that they had disease in their houses.

In examining the following table it must be remembered that *vaccinated* means vaccinated in infancy only. The cases put down as *uncertain* means either vaccinated so shortly before the rash appeared as not, in my mind, to constitute a properly protective vaccination—(but the benefit of the doubt is given against vaccination)—or those cases where it was impossible to get at the true facts of the case: such cases, for instance, as where friends stated that vaccination was performed, but no traces could be seen on the patients. Again, cases dying of confluent Small Pox, where no proper evidence could be got from marks. All these are put down as *uncertain*, but probably many of them had not been vaccinated.

In this way no possibility of error can be made in favour of vaccination, so that the figures cannot be questioned. Every case put down as an unvaccinated one was ascertained not to have been vaccinated, and the cases put down to infantile vaccination alone, were certainly not vaccinated subsequently.

SUMMARY OF CITY CASES.

Total 1979.	Under 10—711	Vaccinated ... 23	Recovered ... 23	{ Hospital ... 5 Non ,, ... 18
			Died ... 0	{ Hospital 0 Non ,, 0
		Unvaccinated 687	Recovered ... 409	{ Hospital ... 146 Non ,, .. 263
			Died ... 278	{ Hospital 127 Non ,, 151
		Uncertain ... 1	Recovered ... 1	{ Hospital ... 0 Non ,, ... 1
			Died ... 0	{ Hospital 0 Non ,, 0
	10 to 20—310	Vaccinated ... 260	Recovered ... 251	{ Hospital ... 91 Non ,, ... 160
			Died .. 9	{ Hospital 6 Non ,, 3
		Unvaccinated 49	Recovered ... 36	{ Hospital ... 12 Non ,, ... 24
			Died ... 13	{ Hospital 7 Non ,, 6
		Uncertain ... 1	Recovered .. 1	{ Hospital .. 1 Non ,, ... 0
			Died ... 0	{ Hospital 0 Non ,, 0
	20 & over—958	Vaccinated .. 889	Recovered ... 790	{ Hospital ... 220 Non ,, ... 570
			Died ... 99	{ Hospital 40 Non ,, 59
		Unvaccinated 36	Recovered ... 21	{ Hospital ... 12 Non ,, ... 9
			Died ... 15	{ Hospital 9 Non ,, 6
		Uncertain ... 33	Recovered ... 18	{ Hospital ... 12 Non ,, ... 6
			Died ... 15	{ Hospital 11 Non ,, 4
Total ... 1979				

There were 2 cases after this, making in all 1981 cases.

1981 cases

HOSPITAL.

At the beginning of the epidemic there were three ward blocks, the centre one of which had an administrative wing. The centre block was also divided into four wards, each with four beds, the other two blocks were divided into two wards each, with eight beds to a ward. They were divided in the centre by the kitchen, pantry and nurse's room. There was a water closet and bathroom to each ward.

There were thus 48 beds available at the beginning of the epidemic or about one per thousand of the population. As the disease progressed, more blocks had to be built, and this was done until the disease showed signs of declining. It must be admitted that at a comparatively early stage of the epidemic the cases got too numerous for the Hospital, and then the disease spread with alarming rapidity.

Many people are of opinion that accommodation ought to have been provided for all the cases ; this to my mind was an utter impossibility, and the same thing has been part of the history of every rapid epidemic, no one suspecting that it would have spread as it did, and no amount of foresight could have coped with the number of cases in one institution. The expense alone would have been ruinous, and it must be remembered that Isolation Hospitals are not intended to receive all the cases in an epidemic, for their true function is to stop it at the beginning, so as, if possible, to avert such a catastrophe.

I will not here enter into the vexed question of *mortality* in the Hospital and outside, quite enough explanation could be given of the higher mortality in the Hospital without attributing neglect to any one, for there was no neglect. All did their best under the *most* trying circumstances, but I think it best not to rake up this matter, and will therefore proceed to the next disease, namely,

SCARLET FEVER.

There were in all 74 cases in the whole city during the year, and coming to the several divisions, we find 47 in No. I.; 13 in No. II.; 9 in No. III.; and 5 in No. IV. Out of that number there were only two *deaths*, one in No. II., and one in No. III. This shows how very mild the cases were.

DIPHTHERIA.

There were 129 cases of this disease in the whole city, distributed as follows:—No. I., 83; No. II., 15; No. III., 19; and 12 in No. IV. Out of that number there were in all 35 *deaths*, distributed as follows:—No. I., 23; No. II., 5; No. III., 4; and No. IV., 3.

It will thus be seen how much more fatal this disease is than Scarlet Fever. It is the most difficult of all the Zymotic diseases to deal with. Its diagnosis is at first difficult, and without bacteriological cultivation this is almost impossible. Its cause and its course are much more difficult to find,

We have not as yet attempted to remove cases of this disease to the Hospital, but, with all due precautions, I consider this could be done when the new Isolation Hospitals are erected at Over. There is no doubt this disease is highly infectious, and we have accordingly adopted every possible precaution, such as isolation at home and thorough disinfection, as well as the prevention of children from infected houses going to school until a certificate was given that the house was considered free from infection.

MEASLES.

There is no doubt that a great many cases of Measles occurred during the year, or rather during the latter part of it, but as the notification of Measles is not adopted here I cannot give the number affected. There were, however, 52 *deaths* during the year in the whole city. These were distributed as follows :—
No. I., 38 ; No. II., 5 ; No. III., 6 ; and No. IV., 3.

This shows that, whatever the number affected was, the disease is not without great danger to life among young children, as out of the 52 deaths I have named 45 were under five years of age.

This again raises the question whether or no notification of Measles ought to be adopted here. I believe that it has been abandoned in some places after it has been adopted, while other places boast that they have adopted it with very satisfactory results. To my own mind it appears that the great mortality suggests the adoption of notification,

while the objections are equally great if not greater. Firstly, it would be extremely expensive; and secondly, the very insidious nature of Measles would make it difficult to deal with. At all events, if the notification were adopted it would mean a considerable addition to your Sanitary Staff.

ENTERIC FEVER.

There were only 18 cases of this disease during the year, and it is curious that there were just 18 in the year 1895. This is a very small number, indeed, considering the population, and the fact that most of the cases occurred in boatmen and persons who presumably brought the illness from outside.

It was distributed in the several divisions as follows:—8 in No. I.; 3 in No. II.; 5 in No. III.; and 2 in No. IV. The deaths from this disease numbered only 2 in the whole city during the year—they occurred in No. I.

ERYSIPELAS.

There were 20 cases recorded in the whole city, 10 in No. I.; 4 in No. II.; 5 in No. III.; and 1 in No. IV. There were no deaths at all.

MEMBRANEOUS CROUP.

There were 4 cases recorded in the whole city, all of them fatal. It is satisfactory that these cases are rare as they are very fatal.

DIARRHŒA AND DYSENTERY.

These diseases are not notifiable here, but there were 13 deaths from them during the year, ten of them in children under five years of age.

PHTHISIS.

Though this is not one of the Zymotic diseases, there is no doubt that it is in a way infectious. The sputum of the patients, for instance, getting dry and disseminated in the air of the room, or the constant breathing by a healthy person of the air of the sick room would convey the disease; and there is no doubt that even the notification of this disease will soon be considered a necessity. It is one of the scourges of this island, and all precautions should be taken against its spread.

There were 39 *deaths* from Phthisis during the year.

I would refer you to the tables at the end of this report for *figures* relating to the foregoing and other diseases, and also to a table giving the number of deaths from certain diseases in Gloucester during the past ten years; and there also you will find meteorological returns for the year, for which latter I am indebted to Mr. W. Hodges, of Park Road.

There were 174 canal boats inspected during the year, and Small Pox cases removed from many of them, and the boats disinfected. Mr. Brydon, Government Inspector, has expressed himself satisfied with the manner in which the work has been carried out.

The map at the end of this Report marked with different coloured spots is intended to indicate every case of Small Pox, Scarlet Fever, Typhoid Fever, and Diphtheria, each disease being indicated by a different colour.

I have the honour to be,

Yours faithfully,

JOHN CAMPBELL, M.D.

Medical Officer of Health

Gloucester,

8th April, 1897.

(A)

TABLE C

During the year 1896, in the Gloucester Urban Sanitary

NAMES AND LOCALITIES adopted for the purpose of these Statistics. (Columns for Population and Births are in Table B.) (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.								MORTALITY FROM SPECIFIC CAUSES		
	At all ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards		Smallpox	Scarlatina	Diphtheria
	(b)	(c)	(d)	(e)	(f)	(g)	(h)		1	2	3
								Under 5	...	...	...
								5 upwards	...	...	...
South Hamlet ...	738	136	168	131	34	166	103	Under 5	164	...	1
								5 upwards	220	...	1
St. Nicholas ...	130	23	23	8	4	30	42	Under 5	3	1	
								5 upwards	11	...	
St. John's ...	138	34	18	11	7	35	33	Under 5	7	...	
								5 upwards	10	1	
Kingsholm ...	69	9	10	6	3	18	23	Under 5	4	...	
								5 upwards	10	...	
TOTALS	1075	202	219	156	48	249	201	Under 5	178	1	1
								5 upwards	251	1	1

The subjoined numbers have also to be taken i

Deaths occurring outside the district among persons belonging thereto ...	11	...	...	...	...	8	3	Under 5	...	.	...
								5 upwards	...	...	...
Deaths occurring within the district among persons not belonging thereto	25	...	...	...	5	11	9	Under 5	...	...	...
								5 upwards	...	...	...

* The heading of column 19 is left blank for the insertion of In

DEATHS

ct, classified according to Diseases, Ages and Localities.

OM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.

FEVERS.					Cholera	Erysipelas	Measles	Whooping Cough	Diarrhoea and Dysentery	Rheumatic Fever	Phthisis	Bronchitis, Pneumonia, and Pleurisy	Heart Disease	*	Injuries	All other Diseases	TOTAL.
Typhus	Enteric or Typhoid	Continued	Relapsing	Puerperal													
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
...
...
...	34	2	4	...	...	15	...	...	5	67	304
...	2	...	...	...	...	...	4	...	...	...	21	27	24	...	16	108	434
...	5	...	2	...	...	7	1	...	2	21	46
...	2	1	6	10	7	...	1	45	84
...	3	2	3	...	...	10	...	...	...	22	52
...	3	...	1	...	10	11	9	...	...	40	86
...	3	...	1	...	...	4	...	..	...	7	19
...	2	5	5	...	1	24	50
...	45	4	10	...	...	36	1	...	7	117	421
...	2	...	...	...	...	...	7	...	3	1	39	53	45	...	18	217	654

nt in judging of the above records of mortality.

...
...	...	...	...	...	...	...	...	...	...	...	2	2	1	...	...	6	11
...
...	...	...	...	..	...	..	...	...	...	...	1	3	3	...	6	12	25

r any other disease which it may be thought desirable to record.

(B) TABLE OF POPULATION, BIRTHS, AND

Coming to the knowledge of the Medical Officer of Health,
classified according to D

NAMES AND LOCALITIES adopted for the purpose of these Statistics.			POPULATION AT ALL AGES.		Registered Births	Aged under 5 or over 5	NEW CASES OF SICKNESS IN EACH KNOWLEDGE OF THE MEDICAL OFFICER						
			Census 1891	Esti- mated to end of 1896			Smallpox	Scarlatina	Diphtheria	Membranous Croup	FEVER		
											Typhus	Enteric or Typhoid	Continued
(a)	(b)	(c)	(d)	(e)	1	2	3	4	5	6	7		
South Hamlet (H)	...	21249	22384	731	Under 5	333	15	24	2	...	...	...
					5 upwards	1360	32	59	...	...	8	...
St. Nicholas	...	7227	7600	217	Under 5	4	3	6	...	...	...	...
					5 upwards	63	10	9	...	...	3	...
St. John's	...	7895	8180	181	Under 5	15	2	8	1	...	...	...
					5 upwards	83	7	11	...	...	5	...
Kingsholm	...	2868	2701	106	Under 5	13	1	2	...	...	...	...
					5 upwards	84	4	10	...	...	2	...
TOTALS	39239	40865	1235	Under 5	365	21	40	3	...	...	...	...
				5 upwards	1590	53	89	...	...	18	...	

State here whether "Notification of Infectious Disease" is compulsory in District. If not, insert in the columns with blank headings the names of any that are notifiable in the District. Mark (H) the Locality in which such Hospital is situated. HOSPITAL, WITHIN DISTRICT.—IN SOUTH HAMLET.

NEW CASES OF INFECTIOUS SICKNESS

the year 1896, in the Gloucester Urban Sanitary District,
 9, Ages and Localities.

LOCALITY, COMING TO THE R OF HEALTH.					NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.												
Puerperal	Cholera	Erysipelas			Smallpox	Scarlatina	Diphtheria	Membranous Group	FEVERS					Cholera	Erysipelas		
9	10	11	12	13	1	2	3	4	Typhus	Enteric or Typhoid	Continued	Relapsing	Puerperal	10	11	12	13
...	102	...	...	...	...	...	...	...	...	..	...	...	...
2	..	10	..	...	462	I	...	...	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...
...	...	4	...	...	39	...	...	...	...	...	...	...	...	...	...	...	...
...	8	...	...	...	...	...	...	...	...	...	...	...	...
...	...	5	...	...	37	...	...	...	...	.	...	...	...	...	...	...	...
...	7	...	...	...	...	...	...	...	...	...	...	...	...
I	...	I	...	...	45	...	...	...	...	...	...	...	...	...	...	...	...
...	120	...	...	...	...	...	...	.	...	...	...	...	...
3	...	20	...	...	583	1	...	...	...	...	...	...	...	...	...	...	...

ES. Since when?—1st November, 1891. Besides the above-mentioned Diseases,
 and fill the columns accordingly. State here the name of the Isolation Hospital
 ; and if not within the District, state where it is situated—INFECTIOUS DISEASES

TABLE
OF
BIRTHS AND DEATHS.

TABLE OF DEATHS

*From some forms of Disease in the District, for the last
ten years ;*

*Also number of Births, and deaths from all Diseases
for same period.*

	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
Small Pox ...	—	—	—	—	—	—	—	—	5	429
Scarlet Fever ...	7	1	—	—	—	9	3	2	2	2
Whooping Cough ...	2	10	26	2	18	3	6	12	11	4
Measles ...	5	57	2	23	16	3	36	3	—	52
Enteric Fever...	7	8	8	4	5	3	2	7	5	2
Erysipelas ...	3	1	3	2	2	1	—	—	1	—
Puerperal Fever ...	4	1	0	1	—	3	2	1	1	—
Diarrhoea ...	12	10	14	19	11	11	22	16	33	13
Diphtheria ...	2	2	2	10	23	33	12	7	3	35
Pyæmia ..	—	2	—	—	2	—	—	—	—	—
Croup ...	3	3	1	4	3	6	2	2	3	4
Bronchitis, &c. ...	91	71	86	130	184	110	163	90	148	89
Births	1171	1197	1250	1228	1284	1255	1254	1216	1301	1235
Deaths from all causes	568	637	650	676	807	716	807	618	749	1075

Deaths in 1896, exclusive of Small Pox, 646.

METEOROLOGICAL
RETURNS
FOR THE YEAR 1896.



JANUARY.

Date	Barometer. Inches.	Solar Radiation	Temperature		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.20	57	53	45	47	48	45.9	93	S S W	2	o	1	'080
2	30.20	54	52	47	49	51	46.9	86	W	1	o	...	...
3	30.25	61.5	52	42.5	43	44	41.8	92	S W	1	o b	1	...
4	30.30	48	44	39	38	40	35.4	84	N E	1	o	...	...
5	30.55	44	41.5	33	39	40	37.7	92	S E	1	o	...	...
6	30.70	35	33	30	30	34	31.2	89	N E	1	o	...	...
7	30.80	42	40.5	31	30	31	27.3	85	N E	1	o	...	trace
8	30.80	46	44	36	41	41	41.0	100	S E	1	o	1	...
9	30.95	47.5	39.5	35	36	37	34.6	91	N	1	o	1	...
10	30.87	45	40	35	33	35	29.8	80	N E	1	o b	1	'090
11	30.75	48	41.5	32	40	41	38.7	92	N E	1	o	1	'010
12	30.45	48	44	36	35	36	33.5	91	N E	1	o	1	...
13	30.05	61	50	40	40	42	37.5	85	S W	1	o	1	'060
14	29.69	50	48.5	35	39	42	35.3	78	S W	1	o	1	'001
15	29.60	70	54	36	47	49	44.8	86	S W	1	o	1	'050
16	30.10	55	52	35	42	46	37.4	73	S W	1	o b	1	...
17	30.20	63	53	42	43	46	39.6	79	W	1	b	1	...
18	30.20	58	48	41	44	45	42.8	92	S W	1	b	1	...
19	30.35	50	47.5	27.5	42	42	42.0	100	N E	1	m	1	...
20	30.40	41	39	28	30	31	27.3	85	N E	1	b	1	...
21	30.40	41	38	27	33	33	33	100	N E	1	b	1	...
22	30.30	53	44	34	35	35	35	100	S W	1	o	1	'020
23	30.25	52	43	38	38	39	36.7	92	W	1	b	1	...
24	30.15	54	50	42	41	43	38.6	84	S W	1	b	1	'190
25	29.95	57	52	47	50	50	50	100	S W	1	o	1	'050
26	30.30	62	51	46	42	43	40.8	92	S W	1	o b	1	...
27	30.25	55	52.5	37.5	50	51	49.0	93	S W	1	o	...	...
28	30.45	56	47	31	37	38	35.6	91	N E	1	b	1	...
29	30.85	47	45	30	32	33	30.0	89	N E	1	b	1	...
30	30.95	49	42.5	39	33	34	31.2	89	S W	1	o	...	'100
31	30.90	52	42	36	35	40	28.5	63	N N W	1	o	...	...
													'652

Total days on which sun shone, 23.

Total days on which rain fell, 10.

Total inches heaviest rainfall on the 24th, '190. Lightest rainfall on 14th, '001.

Rainfall for the month '651 inches.

EXPLANATORY NOTES.—Weather, b, blue sky ; o, overcast ; r, rain ; q, squally ; m, misty t, thunder ; l, lightning ; w, dew.

WIND.—1, light airs ; 2, light breeze ; 3, moderate breeze ; 4, fresh breeze ; 6, moderate gale

FEBRUARY.

Date.	Barometer. Inches.	Solar Radiation.	Temperature		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.70	52	37	25	34	37	29.7	75	N N W	1	o	..	..
2	30.55	64	40	28	34	36	31.0	82	N E	1	b	1	..
3	30.65	51	41	33	35	37	32.2	83	N E	1	o b	1	..
4	30.65	59	45	36	35	37	32.2	83	W	1	b	1	..
5	30.55	62	48	42	43	43	43	100	S W	1	o	1	..
6	30.55	55	44	34	40	42	37.5	85	S W	1	o	1	..
7	30.50	59	51	41	43	44	41.8	92	S W	1	o	1	..
8	30.20	68	54	46	49	51	46.9	86	S W	1	o	1	..
9	30.25	73	54	36	47	48	45.9	93	S W	1	b	1	..
10	29.45	60	50	40	43	43	43	100	S S W	1	o	1	..
11	30.50	74	51	41	44	44	44	100	S W	1	o b	1	..
12	30.35	87	54	42	44	45	42.8	92	S S W	1	b	1	..
13	30.50	57	48	42	45	46	43.9	93	S S E	1	o	..	..
14	30.50	56	45	30	42	43	40.8	92	S E	1	o	..	..
15	30.45	55	45	35	36	36	36	100	E	1	o	1	..
16	30.65	42	38	35	36	37	34.6	91	N E	1	o	..	..
17	30.50	57	40	29	33	35	29.8	80	N E	1	o	1	..
18	30.30	45	42	30	30	31	27.3	85	N E	1	o	..	..
19	29.85	92	54	42	42	43	42	100	S W	1	b	1	.020
20	29.65	94	53	34	49	50	47.9	93	S W	1	..	1	.090
21	29.75	92	52	34	32	32	32	100	S W	1	o b	1	..
22	30.00	90	47	27	40	42	37.5	85	N E	1	o b	1	..
23	30.35	84	42	24	33	34	31.2	89	E	1	b	1	..
24	30.45	83.5	43	26	30	31	27.3	85	E	1	b	1	..
25	30.35	75	37	22	30	31	27.3	85	S E	1	o	1	..
26	30.05	82	39	25	f	29	...	...	N E	1	o	1	..
27	30.25	66	52	34	33	35	29.8	80	S W	1	o b	1	..
28	30.20	91	54	46	49	52	45.9	80	N W	1	o	1	..
29	30.15	70	54	46	48	50	45.9	86	N W	1	o	1	..
													.110

Total days on which sun shone, 24.

Total days on which rain fell, 2.

Total inches heaviest rainfall on the 20th, '090. Lightest rainfall on 19th, '020.

Rainfall for the month, '110 inches.

MARCH.

Date.	Barometer Inches.	Solar Radiation.	Temperature		Hygrometer.				Wind.		State of Weather	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	29.70	86	52	40	49	50	47.9	93	S W	1	o	1	.100
2	29.60	82	52	37	41	45	36.4	72	N W	1	o b	1	.350
3	28.85	91	48	35	39	42	35.3	78	W S W	2	b	1	.040
4	28.80	65	45	38	48	49	46.9	93	W S W	2	b	1	.090
5	29.50	86	50	44	41	46	35.3	67	W N W	2	b	1	.010
6	29.75	62	53	42	49	50	47.9	93	S W	1	...	1	.050
7	30.05	60	53	43	42	43	40.8	92	S W	1	o	1	.280
8	30.00	70	55	51	50	52	48.0	86	S W	1	o b	1	...
9	30.05	72	52	37	52	54	50.0	86	S W	1	o	1	.070
10	30.35	92	53	38	37	37	37	100	S W	1	o	1	...
11	30.10	80	53	43	50	53	47.0	80	S W	1	b	1	.050
12	30.10	55	45	39	46	47	44.9	93	S E	1	o	...	...
13	29.75	55	46	38	45	46	43.9	93	E	1	o	...	.050
14	29.75	96	53	31	45	46	43.9	93	N E	1	o	1	...
15	29.85	70	52	46	42	43	40.8	92	S W	1	o	1	.150
16	29.60	109	53	42	48	51	44.9	80	S W	1	o b	1	...
17	29.95	92	54	42	46	49	42.8	79	S W	1	o b	1	.100
18	29.65	65	46	29	41	43	38.6	84	N E	1	o	...	...
19	30.00	102	52.5	37	37	39	34.4	84	W N W	1	o	1	...
20	29.85	88	54	44	47	50	43.8	80	S W	2	l	1	.310
21	29.75	105	57	48	48	50	45.9	86	S	1	o	1	.025
22	30.05	112	58	42	49	50	47.9	93	S W	1	b	1	...
23	30.07	111	60	37	46	47	44.9	93	S W	1	o b	1	.020
24	29.85	114	65	46	45	47	42.8	86	S W	1	o	1	...
25	29.75	102	58.5	43	49	51	46.9	86	S W	1	o	1	.070
26	29.80	114	52	38	40	46	33.2	61	N W	6	o b	1	.170
27	30.05	100	49	40	40	45	34.2	66	N W	2	b	1	.130
28	29.70	113	47.5	37	38	39	36.7	92	N W	2	o b	1	.010
29	29.85	107	51	31	41	48	33.3	57	N W	3	b	1	...
30	30.10	91	48	30	41	45	36.4	72	N E	1	o	1	...
31	30.25	95	52.5	38	38	41	34.2	77	N E	1	b	1	...
													2.175

Total days on which sun shone, 27.

Total days on which rain fell, 19.

Total inches heaviest rainfall on the 20th. .310. Lightest rainfall on 5th and 28th, .010.

Rainfall, for the month 2.175 inches.

APRIL.

Date.	Barometer. Inches.	Solar Radiation.	Temperature		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.15	107	53	34	38	41	34.2	77	N E	1	b	1	...
2	30.25	98	52	38	41	45	36.4	72	N E	1	b	1	...
3	30.15	95	52	38	45	46	43.9	93	E	1	o b	1	...
4	30.25	96	54	49	45	49	40.7	73	N E	1	b	1	...
5	30.27	103	58	44	49	54	44.1	69	N E	1	b	1	...
6	30.27	104	58	45	48	52	43.9	74	N N E	1	b	1	...
7	30.35	112	62.8	42	48	52	43.9	74	N E	1	o b	1	...
8	30.35	94	59	47	49	51	46.9	86	S W	1	o b	1	...
9	30.30	117	59	43	46	51	40.8	68	N W	1	o b	1	.060
10	30.25	115	57.5	45	49	50	47.9	93	N W	1	o b	1	.080
11	29.95	101	53.5	42.5	45	50	39.7	68	N W	1	o b	1	.020
12	29.90	109	52	48	44	50	37.6	63	N W	4	b	1	.010
13	30.15	113	51	47	40	45	34.2	66	N N W	2	o b	1	.200
14	30.05	99	56	41	48	49	46.9	93	S W	1	o b	1	.180
15	30.25	104	53	42	41	43	38.6	84	N E	1	b	1	.040
16	30.15	97	50	41	47	49	44.8	86	N W	1	b	1	.080
17	30.15	118	58.5	45	47	50	43.8	80	N W	1	b	1	.070
18	30.35	99.5	61.5	46	51	52	50.0	93	S W	1	o b	1	...
19	30.47	110	62	45	46	51	40.8	68	N W	1	b	1	...
20	30.45	120	66	38	52	56	48.2	75	N E	1	b	1	...
21	30.50	113	60	37	49	55	43.2	65	N W	1	b o	1	...
22	30.35	114	66	43	50	55	45.2	70	N E	1	o b	1	...
23	30.25	115	59.5	40	47	50	43.8	80	N E	1	b	1	...
24	30.25	113	65	40	49	53	45.0	74	N E	1	o b	1	...
25	30.15	105	59	51	52	54	50.0	86	S W	1	b	1	...
26	30.15	124	63	49	52	58	46.6	66	N W	1	b	1	...
27	30.15	119	63	45	55	58	52.3	81	W	1	o b	1	...
28	29.95	114	60	39	48	55	41.3	60	N W	1	b	1	...
29	29.75	116	56	39	47	54	40.1	59	N W	1	o b	1	trace
30	29.90	117	56.5	38.5	44	49	38.6	67	N W	1	b	1	.010
													.750

Total days on which sun shone, 30.

Total days on which rain fell, 10.

Total inches heaviest rainfall on the 13th, '200. Lightest rainfall on 12th and 30th, '010.

Rainfall, for the month '750 inches.

MAY.

Date.	Barometer. Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.25	101	53	37.5	43	50	35.6	58	NE	1	o b	1	..
2	30.40	95	53	36	42	46	37.4	73	WE	1	o b	1	..
3	30.45	113	58	45	42	48	35.4	62	NE	1	b	1	..
4	30.50	116	61	39	43	46	39.6	79	NE	1	b	1	..
5	30.35	105	65	42	49	55	43.2	65	NE	1	b	1	..
6	30.35	115	61.5	43	47	52	41.9	69	E	1	b	1	..
7	30.40	109	62	46.5	53	59	47.7	66	EE	1	b	1	..
8	30.35	114	62	46	46	48	43.8	86	N	1	o b	1	..
9	30.25	122	68	43	49	52	45.9	80	NE	1	o b	1	..
10	30.25	123	70	44	53	58	48.5	71	NE	1	b	1	..
11	30.35	125	74	45	52	57	47.4	70	NE	1	b	1	..
12	30.45	127	78	50	56	62	50.8	67	NE	1	b	1	..
13	30.40	117	73	42	53	60	46.8	62	NE	1	o b	1	..
14	30.25	125	70	46	54	61	47.9	62	NW	1	b	1	..
15	30.20	122	71	45	56	63	50.1	63	NW	1	o b	1	..
16	30.30	106	64	45	52	57	47.4	70	NE	1	o b	1	..
17	30.30	131	73	54	58	65	52.3	63	NE	1	o b	1	..
18	30.30	125	76	53	58	62	54.6	77	SW	1	o b	1	..
19	30.20	122	66	48	54	61	47.9	62	NNW	2	o b	1	..
20	30.00	125	59	36	47	54	40.1	59	NW	3	o b	1	.020
21	30.20	121	61.5	48	46	52	39.9	64	NW	2	o b	1	.150
22	29.95	82	60	54	51	56	46.3	70	N	1	o	1	.015
23	30.10	125	62	45	55	59	51.4	76	NW	1	o	1	..
24	30.45	111	63	44	51	57	45.5	65	N	1	o b	1	..
25	30.55	117	67	44	53	60	46.8	62	EWE	1	o b	1	..
26	30.45	122	64	47	50	55	45.2	70	NE	2	o b	1	..
27	30.35	128	65.5	47.5	55	61	49.8	67	NE	2	b	1	..
28	30.40	116	66	46	49	52	45.9	80	NE	1	o	1	..
29	30.25	129	77.5	46	58	65	52.3	63	NE	1	b	1	..
30	30.25	118	68	50	55	60	50.6	71	NE	1	o	1	..
31	30.25	125	78	51	59	56	53.3	64	NE	1	b	1	..
													.185

Total days on which sun shone, 31.

Total days on which rain fell, 3.

Total inches heaviest rainfall on the 21st, .150. Lightest rainfall on 22nd, .015.

Rainfall for the month, .185 inches.

JUNE.

Date.	Barometer. Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.05	130	79	51	58	64	53.0	67	S E	1	b	1	...
2	29.80	119	76	57	58	67	50.8	56	W S W	1	o b	1	trace
3	29.85	134	78	57	63	69	58.3	68	S W	1	o b	1	...
4	29.90	116	75	53	64	70	59.4	69	S W	1	o b	1	.400
5	29.90	130	70	52	58	65	52.3	63	S W	1	o b	1	.080
6	29.85	120	67	54	57	65	50.4	59	S W	1	o	1	.060
7	29.65	119.5	64	54	54	55	53.0	93	S W	1	o b	1	.055
8	29.60	126	68	54	58	63	53.8	72	S W	1	o b	1	.280
9	29.55	116	70	56	56	56	56	100	N E	1	o	1	.680
10	29.69	115	69	58	60	65	55.9	73	N	1	o	1	...
11	29.90	126	77	53	61	67	56.2	68	N W	1	o	1	...
12	30.20	125	74	54	61	66	57.0	73	S W	1	b	1	...
13	30.15	133	81	59	63	70	57.6	65	S E	1	b	1	...
14	30.20	131	78	60	67	73	62.6	70	S E	1	b	1	...
15	30.10	133	84	61	65	70	61.1	73	W E	1	o b	1	.530
16	29.85	131	82	60	61	70	54.0	57	S W	1	b	1	.130
17	29.80	123	69.5	52	60	60	60	100	S W	1	o	...	.240
18	30.15	133	70	54	57	65	50.4	59	N W	1	b	1	...
19	30.25	124	71	53	53	62	45.3	54	S W	1	o b	1	...
20	30.29	127	69	52	61	65	57.7	78	W N W	1	o b	1	...
21	30.25	126	68	47	58	61	55.4	82	S W	1	o b	1	...
22	30.28	114	68	55	61	66	57.0	73	W	1	o b	1	.060
23	30.20	124	71	57	59	61	57.3	88	W S W	1	o	1	.005
24	30.10	134	73	55	62	67	58.0	73	N & S E	1	o b	1	...
25	30.10	128	68	52	58	63	53.8	72	N	1	o b	1	.170
26	30.27	121	73	53	59	65	54.1	68	N E	1	o b	1	...
27	30.25	126	80	64	65	70	61.1	73	W	1	b	1	...
28	30.17	127	73	49	66	70	62.9	78	W S W	1	o b	1	...
29	30.35	123	70	56	56	61	51.7	72	N N W	1	o b	1	...
30	30.07	126	68	56	62	66	58.8	78	N N W	1	o b	1	...
													2.690

Total days on which sun shone, 29.

Total days on which rain fell, 12.

Total inches heaviest rainfall on the 15th, .530.

Lightest rainfall on the 23rd, .005.

Rainfall for the month, 2.690 inches.

JULY.

Date.	Barometer. Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.05	95	62	50	54	58	50.4	76	S W	3	o b	1	.260
2	30.05	98	67	56	55	56	54.1	93	N N W	1	o b	1	.015
3	29.97	131.2	75	56	63	68	59.1	73	S W	1	o b	1	.050
4	30.10	127	72	54	58	60	56.2	88	W	3	o b	1	...
5	30.25	125	75	52	58	63	53.8	72	S W	1	b	1	...
6	30.20	131.5	81	57	63	71	56.9	61	S W	1	b	1	...
7	30.00	126	78	52	64	72	58.0	61	S W	1	o b	1	.340
8	30.00	128	75	63	60	63	57.5	82	S W	1	o b	1	.050
9	29.95	131	75	60	65	71	60.4	69	S W	1	o	1	...
10	30.15	117	68	52	60	63	57.5	82	N E	1	o b	1	...
11	30.35	127	76	56	61	68	55.5	64	E	1	b	1	...
12	30.30	126	81	59	65	71	60.4	69	N E	1	b	1	...
13	30.28	130	84	61	62	70	55.8	61	W	1	b	1	...
14	30.15	124	79	61	65	73	59.1	62	W S W	1	b	1	...
15	30.10	123	71	53	60	68	53.7	60	N E	1	b	1	...
16	30.25	98	66	49	54	61	47.9	62	N E	1	b	1	...
17	30.35	117	71	50	53	59	47.7	66	N E	1	b	1	...
18	30.35	123.5	75	60	59	65	54.1	68	N W	1	b	1	...
19	30.31	124	77	57	64	70	59.4	69	W	1	o b	1	...
20	30.15	131	86	63	64	74	55.7	55	W	1	b	1	...
21	29.97	126	81	53	65	75	57.8	55	W S W	1	b	1	.080
22	30.07	125	68	53	56	61	51.7	72	W N W	1	b	1	...
23	30.12	127	71	53	60	65	55.9	73	W	1	b	1	...
24	30.05	129	75	60	61	67	56.2	68	W S W	1	b	1	.130
25	29.80	105	69	59	58	60	56.2	88	S S W	1	o b	1	.110
26	29.75	113	70	51	63	69	58.3	68	W S W	1	o b	1	.180
27	30.05	120	65	44	53	60	45.8	62	N W	1	o b	1	...
28	30.25	130	70	47	56	62	50.8	67	W S W	1	b	1	...
29	30.00	115	68.5	58	56	61	51.7	72	S W	1	b o	1	...
30	29.87	126	74	57	59	63	55.6	77	W	1	o b	1	...
31	30.00	122	75	54	60	65	55.9	73	N E	1	o b	1	...
													1.215

Total days on which sun shone, 31.

Total days on which rain fell, 9.

Total inches heaviest rainfall on the 7th, .340

Lightest rainfall on the 25th, .110.

Rainfall for the month, 1.215 inches.

AUGUST.

Date.	Barometer. Inches.	Solar Radiation.	Temperature		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.10	116	75	54	59	63	55.6	77	N E S W	1	o b	1	...
2	30.15	112	66	54	58	61	55.4	82	N E	1	o	1	...
3	30.10	122	74	49	58	63	53.8	72	S W	1	o b	1	.010
4	30.08	123	68	48	55	62	49.0	62	N W	1	o b	1	...
5	30.20	108	65	49	54	61	47.9	62	N N E	1	b o	1	...
6	30.28	127	70	50	54	60	48.7	66	N E	1	b o	1	...
7	30.20	101	65.5	51	54	59	49.5	71	N N W	1	o b	1	...
8	30.15	112	66	54	55	59	51.4	76	N E	1	o b	1	trace
9	30.20	98	65	58	54	58	50.4	76	N N E	1	o b	1	.020
10	30.30	119	70	48	59	63	55.6	77	N W	1	o b	1	...
11	30.37	132	73	59	59	65	54.1	68	N W	1	o b	1	...
12	30.35	128	75	57	64	69	60.1	73	N W	1	b	1	...
13	30.25	129	75	57	63	68	59.1	73	W	1	o b o	1	...
14	30.05	127	69	52	60	68	53.7	60	W N W	1	o b	1	...
15	30.10	119	68	47.5	54	59	49.5	71	W N W	1	o b	1	...
16	30.21	123	70	47	57	64	51.2	63	N W	1	b	1	...
17	30.20	122	72.5	57	55	59	51.4	76	S	1	o	1	.115
18	30.10	127	71.5	46	59	60	58.1	94	N N W	1	o	1	...
19	29.95	86	60	54	57	59	55.2	88	N W	1	o b	1	.480
20	30.00	126	69	56	53	54	52.0	93	N E W	1	o b	1	...
21	29.95	104	65	50	60	63	57.5	82	S W N	1	o	1	.040
22	30.20	122	69	59	58	65	52.3	63	N W	1	b	1	...
23	30.25	134	74	60	64	69	60.1	73	N W	1	o	1	.040
24	30.00	94	66.5	54	64	65	63.2	94	S W	1	o	1	.175
25	29.90	120	66	45	56	62	50.8	67	S S W	1	o b	1	.015
26	29.75	117	59	42	51	56	46.3	70	S W	1	o b	1	.155
27	30.00	113	63	47	53	60	46.8	62	N N E	1	b	1	...
28	30.25	107	64	52	52	56	48.2	75	N W	1	o	1	...
29	30.20	89	64	54	55	59	51.4	76	S W	1	o	1	.050
30	29.90	91	61	47	57	59	55.2	88	S W	1	o	1	.420
31	29.95	110	64	54	48	57	44.9	80	N E	1	o b	1	.110
													1.630

Total days on which sun shone, 31.

Total days on which rain fell, 12.

Total inches heaviest rainfall on the 19th, .480. Lightest rainfall on 3rd, .010.

Rainfall for the month, 1.630 inches.

SEPTEMBER.

Date.	Barometer. Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	30.00	89	63	55	55	55	55	100	W E	1	o b	1	.040
2	29.90	95	64	55	54	58	50.4	76	W	1	o b	1	...
3	29.93	123	69	54	55	59	51.4	76	S W	1	o b	1	.220
4	29.90	76	63	58	59	59	59	106	S W	1	o	...	.950
5	29.75	114	68	55	60	61	59.1	94	N E	1	o	1	...
6	30.07	72	59	55	55	58	52.3	81	N E	1	o	...	...
7	30.15	83	69	50	55	58	52.3	81	N E	1	o	1	...
8	29.95	91	67	59	60	64	56.7	77	N E	1	o	1	.520
9	29.655	107	67	58	62	65	59.5	83	S W	3	o	1	.260
10	29.674	127	70	48	58	61	55.4	82	W S W	1	o	1	.060
11	29.780	105	67	50	57	57	57	100	S	1	o	1	.070
12	29.770	107	68	56	59	62	56.4	82	S W	1	o b	1	.530
13	29.304	108	68	55	58	62	54.6	77	S W	1	o	1	.190
14	29.553	103	65	51	58	61	55.4	82	S S W	1	o	1	.060
15	29.865	120	68	50	57	62	52.7	72	S	1	o b	1	.010
16	30.065	107	66	55	57	60	54.4	82	S W	1	o b	1	.110
17	30.130	75	61	54	57	59	55.2	88	S W	3	o	...	.510
18	29.818	81	60	45	55	56	54.1	93	S W	2	o	1	.050
19	29.830	115	62	44	51	54	48.1	80	W S W	1	o b	1	...
20	29.789	111	60	38	50	54	46.1	74	S W	1	o b	1	.095
21	29.851	106	58	48	48	49	46.9	93	S W	3	o	1	.320
22	29.290	70.2	57	55.2	55	55	55	100	W S W	6	o	1	.110
23	29.470	108	60	48	49	54	44.1	69	S W	6	o b	1	trace
24	29.930	107	62	52	50	56	44.4	65	W S W	1	o	1	.680
25	28.780	70	59	49	56	58	54.2	87	N W	6	o	1	.015
26	29.831	94	61	51	49	50	47.9	93	S W	2	o	1	.025
27	29.714	83	66.5	42	62	64	60.3	88	S W	1	o	1	.210
28	29.931	114	59	45	55	57	53.2	87	W N W	1	o b	1	.015
29	30.110	97	59	44	49	52	45.9	80	S S W	1	o m b	1	...
30	30.460	100	61	43	47	48	45.9	93	N E	1	o m b	1	...
													5.030

Total days on which sun shone, 27.

Total days on which rain fell, 22.

Total inches heaviest rainfall on the 4th, '950.

Lightest rainfall on the 15th, '010.

Rainfall for the month, 5'030 inches.

OCTOBER.

Date.	Barometer. Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind.		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point.	Humidity.	Direction.	Force.			
1	30.481	100	58	53	49	49	49	100	NENWSW	1	o m l	1	.035
2	30.190	75	60	54	56	57	55.1	93	S W	1	o	...	trace
3	30.030	107	60	55	57	58	56.1	93	S W	1	o	1	.050
4	29.530	74	57	41	53	53	53	100	S W	1	o b o	1	.080
5	29.581	106	55	44	43	48	37.5	67	S S W	1	b	1	.075
6	29.627	64	66.5	41	48	49	46.9	93	S W	4	o	...	.380
7	29.780	75	61.5	47	45	48	41.7	79	S E S W	6	o b	1	.250
8	29.470	102	60	48	52	57	47.4	70	S W	6	o b	1	.100
9	29.780	10	61	48	54	55	53.0	93	S W	2	o b	1	.225
10	29.730	97	56.5	40	52	54	52.0	93	S W	1	o b	1	...
11	29.781	99	45.5	35	39	43	34.2	71	N W	1	o b	1	.010
12	29.933	73	48	30	40	42	37.5	85	N E	1	o b	1	trace
13	30.244	72	49	39	38	40	35.4	84	N E	1	o m b	1	.050
14	30.291	95	55	45	45	45	45	100	S W	1	o	1	.065
15	30.210	58	52	49	49	50	47.9	93	S W	1	o	...	.140
16	30.031	57	51	47	50	51	49.0	93	W E	2	o	...	.230
17	29.893	67	50	35	46	47	44.9	93	N E	1	o	...	.020
18	29.381	76	47	34	41	44	37.5	77	N W	1	o b	1	.010
19	29.199	86	49	32	41	43	38.6	84	S W N W	1	o b	1	.015
20	29.332	89	50	30	31	37	22.5	55	N W	1	m	1	...
21	29.432	51	41	27	32	33	30.0	89	N N W	1	f b	1	...
22	29.756	81	46.5	31	f	31	...	...	N N W	1	f b	1	...
23	29.957	85.5	49.5	35	35	36	33.5	91	N E	2	o b	1	trace
24	29.567	85	51	35	47	48	45.9	93	S W	1	o	...	.320
25	29.271	87	46.5	36	39	40	37.7	92	S W	1	o b	1	.500
26	29.542	89	51	35	41	42	39.8	92	S S W	1	o b	1	...
27	29.748	84	49.5	29	38	39	36.7	92	S W	1	b	1	trace
28	29.781	58	42.5	32	32	33	30.0	89	S W N E	1	...	1	...
29	29.590	54	41	31	32	32	32	100	N E	1	...	1	...
30	29.792	69	48	30	40	41	38.7	92	N E	1	...	1	...
31	29.734	68	41.5	31.5	f	32	...	...	N E	1	...	1	.075
													2.530

Total days on which sun shone, 25.

Total days on which rain fell, 19.

Total inches heaviest rainfall on the 25th, .500. Lightest rainfall on 11th and 18th, .010.

Rainfall for the month, 2.530 inches.

NOVEMBER.

Date.	Barometer. Inches.	Solar Radiation.	Temperature		Hygrometer.				Wind		State of Weather.	Days' Sunshine	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	29.756	62	47	40	42	43	40.8	92	NE	1	o b	1	trace
2	29.933	56	46.5	38	40	41	38.7	92	NE	1	o	1	...
3	29.995	61	45.5	27	39	41	36.5	84	NW E	1	o	1	...
4	30.381	60	44	28	f	33	...	...	NE	1	o b	1	...
5	30.531	64	46	25	f	30	...	...	NE	1	o b	1	...
6	30.401	65	42	27	f	29	...	...	NE	1	o b	1	...
7	30.056	50	47	29	f	30	...	...	SW	1	o	...	.120
8	29.789	54	43	31	37	39	34.4	84	W	1	o b	1	...
9	30.331	47	42	36	33	34	31.2	89	NE	1	o	1	...
10	30.451	57	46	39	36	38	33.3	83	SW	1	o b	1	...
11	30.233	59	49	42	43	45	40.7	85	SW	1	o	1	...
12	30.049	63	51	35	43	44	41.8	92	SW	1	o b	1	...
13	29.883	56	47.5	33	42	44	39.6	84	SSW	1	o	1	.020
14	29.783	57	47	35	35	35	35	100	SW	1	o	1	.350
15	29.400	54	47	37	39	41	36.5	84	SSW	1	o	1	.140
16	29.881	50	46	37	40	40	40	100	WE	1	o b	1	...
17	30.091	50.5	41	35	37	38	35.6	91	WE	1	o	1	...
18	29.881	52	45.5	32	39	41	36.5	84	SW	1	o	1	.040
19	30.131	47.5	47	32	32	32	32	100	NESW	1	o b	1	...
20	30.083	54	49	33	43	47	38.5	73	SW	1	o	1	...
21	30.481	56	48	41	40	41	38.7	92	SW	1	o b	1	...
22	30.591	57.2	48	45	45	46	43.9	93	SW	1	o m	...	...
23	30.591	53.2	47	43	44	45	42.8	92	SW	1	o m	...	trace
24	30.621	46	44.5	38	43	44	41.8	92	NE	1	o m	...	...
25	30.533	45	40	39	37	40	33.1	76	E	1	o m	...	...
26	30.381	49	42	36	38	41	34.2	77	NE	1	o b	1	...
27	30.141	50	44	33.5	36	38	33.3	83	NNE	1	o b	1	.010
28	29.981	44	39	33	32	34	28.5	79	NE	1	o b	1	...
29	30.283	40	38	24	34	36	31.0	82	NE	1	o m	1	...
30	30.309	41	39	25	f	24	...	...	NE	1	o m	1	...
													.680

Total days on which sun shone, 25.

Total days on which rain fell, 6.

Total inches heaviest rainfall on the 14th, .350.

Lightest rainfall on the 27th, .010.

Rainfall for the month, .680 inches.

DECEMBER.

Date.	Barometer Inches.	Solar Radiation.	Temperature.		Hygrometer.				Wind.		State of Weather.	Days' Sunshine.	Rainfall.
			Maximum.	Minimum.	Wet Bulb.	Dry Bulb.	Dew Point	Humidity.	Direction.	Force.			
1	29.909	45.5	41	37.5	34	39	28.6	68	S E	1	o b	1	.015
2	29.621	51	49	41	40	41	38.7	92	S E	1	o	1	.100
3	29.521	63	51	43	47	48	45.9	93	S E	2	o	1	.210
4	29.141	50	47.5	42	43	47	38.5	73	S E	4	o	...	.420
5	28.972	52	45.5	40	43	44	41.8	92	S W	2	o	1	.080
6	28.631	51	47.5	36	43	44	41.8	92	S W	1	o m	1	.110
7	29.221	54	45	34	42	43	40.8	92	N W	2	o m	1	...
8	29.691	53	49	39	38	38	38	100	S S W	4	o m	1	.040
9	29.422	51	47.5	38	44	46	41.7	86	S W	1	o	1	...
10	29.839	58	51	43	45	46	43.9	93	S S W	1	o	1	.240
11	29.883	55	48	34	43	45	40.7	85	N W	1	o	1	...
12	29.784	54	45	43	41	43	38.6	84	S W	1	o	...	.220
13	29.772	48	43	37	37	38	35.6	91	N E	4	o	...	.210
14	29.222	46	41	35	40	41	38.7	92	N E	1	o	1	.025
15	29.654	47	39	31	37	38	35.6	91	S W	1	o	...	...
16	29.682	38	35	31	32	32	32	100	W E	1	o frz.	...	...
17	29.613	42	37	28	34	34	34	100	N E S W	1	o	...	snow
18	29.524	35	34	31	f	...	..	...	N	1	o	...	.020
19	29.778	40	36	33	33	34	31.2	89	S W	1	o	1	...
20	30.200	44	37.5	30	35	35	35	100	N	1	o	...	...
21	30.172	40	38	31	33	33	33	100	N E	1	o	1	...
22	30.022	46	41	28	37	38	35.6	91	S N E	1	o	1	...
23	30.217	36	36.5	25	f	...	...	...	S	1	o b	...	..
24	30.133	47	45	36	36	37	34.6	91	S W	1	o	...	.160
25	30.233	49	49	40	35	36	33.5	91	S W	1	b	1	.155
26	30.183	54	57	40	48	49	46.9	93	S W	1	o (b)	1	.030
27	30.383	51	50.5	42	40	43	36.4	78	S W	1	b	1	.360
28	29.783	57	51.5	42	50	50	50	100	S W N E	1	o	1	trace.
29	30.335	55	50	43	32	32	32	100	N E	1	b	1	...
30	29.993	58	52	42	50	52	48.0	86	S W	1	o	1	.160
31	30.051	55	49	40	43	45	40.7	85	S	1	b	1	.010
													2.565

Total days on which sun shone, 21.

Total days on which rain fell, 18.

Total inches heaviest rainfall on the 4th, .420.

Lightest rainfall on the 31st, .010.

Rainfall for the month, 2.565.

Earthquake shock, 5-35 a.m., 17th.

1896 Rainfall

...

...

20.211 inches.

GLOUCESTER

PORT SANITARY AUTHORITY.

MR. CHAIRMAN AND GENTLEMEN,

I have nothing to say about the work of the Port during 1896 but what is satisfactory. I stated in my previous Report that this had now been made a permanent Sanitary Authority with extended jurisdiction, also that the Infectious Diseases Notification Act, applicable to the same diseases as are notifiable in the city, had been adopted.

As the book used previously for registering vessels was not in my opinion sufficient to enable us properly to deal with this subject, I had a new set of books prepared, which will enable us to keep a record of the Sanitary condition of every vessel and also a record of any Sanitary work done in connection with such vessel. Pocket-books have also been supplied for the use of the Inspectors, so that they can take notes on board and also serve notices upon the captains or those in charge.

There have been 347 vessels examined during the year, 250 steam and 97 sailing. They have been found in a fairly satisfactory state. Each vessel is carefully examined in the tidal basin before she is

allowed to enter the docks, and if anything is found requiring special attention I am at once communicated with by telephone by night or by day.

During the past few months special attention has been given to the examination of vessels and crews, in view of the very dangerous disease, Bubonic plague, which is at present raging in India, and as vessels trading with ports other than Sharpness and Gloucester, such as Liverpool, Cardiff, or even London, might bring the plague to this country, and cases could be transmitted here. We keep a list of the ports trading with infected countries so as to be doubly on our guard in this matter.

Bubonic plague is even more dangerous than the Cholera, for in one form of it the person affected may be, at first at all events, able to go about among his fellows, and in that way disseminate disease far and wide before the nature of the disease is discovered. The other form is quite apparent from the first as the patient rarely survives more than two days.

The fact that the Bristol Authority examine our ships by agreement is a great safeguard, but as only Cholera is understood in that arrangement, it seems necessary that some arrangement regarding Bubonic plague should be entered into.

I understand that the present head inspector, Captain Calway is about to retire and that Captain Field, who has hitherto had charge of the old dock entrance at Sharpness, is likely to be appointed Dockmaster in his stead.

I cannot too highly appreciate the great services rendered us by the Canal Company and their officials, in placing their private telephone wire at our disposal, so that I can be always in telephonic communication with Sharpness.

I am pleased that with the exception of one vessel that brought Small Pox about three years ago, we have been enabled to keep the Port free from Infectious Disease.

I append a list of all vessels examined in the Port during the year,

And remain,

Yours faithfully,

JOHN CAMPBELL, M.D.,

Port Medical Officer of Health.

VESSELS INSPECTED AT SHARPNESS IN 1896.

January	1	...	S.S. "Humbert" from New York
"	1	...	B.K. "Inga" from St. John's
"	2	...	S.S. "Indiana" from Nicolaieff
"	2	...	Schooner "Louise" from Bordeaux
"	2	...	S.S. "Matthew Bedlington" from Sulina
"	3	...	S.S. "Hero" from Hamburg
"	4	...	S.S. "Joseph Arbib" from Alexandria
"	6	...	S.S. "Hanover" from Braila
"	6	...	B.K. "Maria E. Teresa" from Mobile
"	7	...	S.S. "Excelsior" from Novorossisk
"	10	..	Schooner "Miss Thomas" from Emden
"	12	...	S.S. "Clio" from Hamburg
"	12	...	S.S. "Sneaton" from Nicolaieff
"	15	...	S.S. "Broomhaugh" from Novorossisk
"	17	...	S.S. "Echo" from Hamburg
"	17	...	S.S. "Red Jacket" from Novorossisk
"	22	...	S.S. "Hero" from Hamburg
"	23	..	S.S. "Nanna" from Libau
"	28	..	S.S. "Elfie" from Bourgas
February	1	...	S.S. "Clio" from Hamburg
"	4	...	S.S. "Bordeaux" from Dieppe
"	5	...	S.S. "Regimen" from Alexandria
"	5	...	S.S. "Echo" from Hamburg
"	5	...	Ketch "Emma Jane" from St. Malo
"	5	...	Lugger "Marianne" from Treport
"	7	...	S.S. "Grip" from Christiansund
"	11	...	S.S. "Hero" from Hamburg
"	16	...	S.S. "Tyr" from Hamburg
"	17	...	Schooner "Levant" from Rouen
"	17	...	Schooner "Bertie Mills" from Saffie
"	20	...	S.S. "Clio" from Hamburg
"	20	...	S.S. "Helgoland" from Hamburg
"	25	...	S.S. "Echo" from Hamburg
"	27	...	Barque "Brussels" from Portland
"	29	...	S.S. "Josip Braili" from Sevastopol
"	29	..	Schooner "Catharina" from Groningen
March	2	...	S.S. "Hero" from Hamburg
"	4	...	S.S. "Treneglos" from Sulina
"	11	...	S.S. "Gleanystwith" from Philadelphia

March	12	...	S.S. "Clio" from Hamburg
,,	13	...	S.S. "Aeon" from New York
,,	13	...	S.S. "Cairo" from Alexandria
,,	13	...	S.S. "Nellie" from Theodocia
,,	14	...	S.S. "Byzanz" from Buenos Ayres
,,	15	...	Schooner "Susan Bittery" from Rouen
,,	25	...	S.S. "Echo" from Hamburg
,,	26	..	S.S. "Coanwood" from Sulina
,,	26	...	B.K. "Aspasia" from Rosario
,,	26	...	Schooner "Whim" from Rouen
,,	27	...	S.S. "County" from Odessa
,,	28	...	S.S. "Blagdon" from Rosario
,,	28	...	S.S. "Discovery" from Nicolaieff
,,	29	...	S.S. "Ilios" from Novorossisk
April	1	...	B.K. "General Mellinet" from San Francisco
,,	2	...	S.S. "Clio" from Hamburg
,,	4	...	S.S. "Hero" from Hamburg
,,	4	...	Brig "Primo" from Braevig
,,	7	...	Brig "Anna" from Christiania
,,	9	...	B.K. "Finn" from Fredriksstad
,,	10	...	S.S. "Hibernia" from Colastine and Rosario
,,	10	...	S.S. "B. G. Baker" from Nicolaieff
,,	10	...	B.K. "Kjellestad" from Christiania
,,	11	...	S.S. "Adjutant" from Rosario
,,	11	...	B.K. "Africa" from Apalachicola
,,	13	...	B.K. "Visurgio" from San Francisco
,,	15	...	S.S. "Echo" from Hamburg
,,	16	...	S.S. "Barnesmore" from Ismail
,,	18	...	Schooner "Jenneet Eugenie" from Bayonne
,,	18	...	Ketch "Jersey Packet" from St. Malo
,,	20	...	S.S. "Hero" from Hamburg
,,	23	...	Schooner "Little Mystery" from Oporto
,,	23	...	Schooner "Sylvanus" from Christiania
,,	24	...	S.S. "Bivouac" from Stettin and Dantzic
,,	28	...	S.S. "Lomas" from Buenos Ayres
,,	25	...	S.S. "Moss Rose" from Rouen
,,	29	...	S.S. "Osiria" from Hamburg
,,	29	...	Ship "Carnedd Llewellyn" from San Francisco
,,	30	...	B.K. "Regent Murray" from Rosario
May	3	...	S.S. "Hero" from Hamburg
,,	10	...	S.S. "Scoresby" from Dantzic
,,	10	...	Barque "Susanne Boulet" from Rosario

May	12	...	S.S. "Jane" from Svartvik
"	13	...	S.S. "Clio" from Hamburg
"	15	..	Barque "Sherwood" from Mobile
"	15	...	S.S. "Tatti" from Abo
"	18	...	S.S. "Osiria" from Hamburg
"	22	...	S.S. "Hero" from Hamburg
"	22	...	S.S. "Fortuna" from Abo
"	22	...	B.K. "Skoda" from Rosario
"	23	...	S.S. "Euskaro" from Penracola
"	23	...	S.S. "Edith" from Nicolaieff
"	23	..	B.K. "Alm" from Rosario
"	23	...	B.K. "Balkan" from Rosario
"	23	...	B.K. "T. Gallus" from Abo
"	25	...	S.S. "Nerma" from Ljusne
"	25	...	S.S. "Palma" from Harnas and Hudicksvall
"	28	...	S.S. "Helgoland" from Hamburg
"	31	...	S.S. "Cairnloch" from Holmsund
"	31	...	S.S. "William C. Mitchell" from Rosario
June	1	...	S.S. "Osiria" from Antwerp
"	2	...	S.S. "Trevean" from Galatz and Reni
"	2	...	Schooner "Cecil Brindley" from Groningen
"	4	...	S.S. "Clio" from Hamburg
"	8	...	S.S. "Bainbridge" from Yemrnik
"	8	...	S.S. "Aros" from Galatz
"	9	...	S.S. "Isle of Ramsey" from Nicolaieff
"	9	...	S.S. "Echo" from Hamburg
"	10	...	S.S. "Romanby" from Skutskar
"	10	...	S.S. "Sunpulp" from Drammen
"	10	...	Schooner "Rosevean" from Rouen
"	11	...	S.S. "Elm Branch" from Pinsacola
"	11	...	B.K. "Charlotte" from Halifax
"	11	...	S.S. "Chicklade" from Parrsboro
"	12	...	S.S. "Gearloch" from Alexandria
"	12	...	B.K. "Lepanto" from Bahia Blanca
"	13	...	S.S. "Hero" from Hamburg
"	14	...	S.S. "Ben Wyvis" from Gefle
"	14	...	S.S. "Graphic" from Skutskar
"	14	...	S.S. "Karooon" from Baltimore
"	15	...	B.K. "Natant" from Buenos Ayres
"	15	...	B.K. "Bianca Casanova" from Buenos Ayres
"	17	...	S.S. "Osiria" from Antwerp
"	17	...	Dandy "Andre Marie" from Bayonne

June	18	...	S.S.	"Wylam"	from Archangel
"	21	...	S.S.	"Iltyd"	from Nicolaieff
"	22	...	S.S.	"North Flint"	from Three Rivers
"	22	...	S.S.	"Horden"	from Kemi
"	23	...	S.S.	"Aloedene"	from Riga
"	23	...	S.S.	"Tookwith"	from Taganrog
"	23	...	S.S.	"Helgoland"	from Hamburg
"	23	...	S.S.	"City of Belfast"	from Norfolk
"	24	...	S.S.	"Beryl"	from Puschalacha
"	24	...	S.S.	"Clio"	from Hamburg
"	24	...	S.S.	"Gena"	from St. John's
"	24	...	B.K.	"Concordia"	from Buenos Ayres
"	25	...	S.S.	"Tana"	from Kotka and Rafso
"	27	...	B.K.	"Saturnus"	from Rosario
"	27	...	S.S.	"Elmville"	from Ghenitschesk
"	28	...	S.S.	"Carl Hirschberg"	from Archangel
"	29	...	S.S.	"Horace"	from Kemi
"	29	...	S.S.	"Echo"	from Hamburg
"	30	...	B.K.	"Vale"	from Rosario
July	1	...	B.K.	"Vale of Nith"	from Rosario
"	2	...	S.S.	"Nerma"	from Sundsvall
"	3	...	S.S.	"Trio"	from Abo
"	5	...	S.S.	"Hero"	from Antwerp
"	5	...	Schooner	"Sicie"	from Groningen
"	7	...	S.S.	"Sunshine"	from Archangel
"	9	...	S.S.	"Octa"	from Braila
"	9	...	S.S.	"Sir Galahad"	from Archangel
"	10	...	S.S.	"Rannock"	from Taganrog
"	10	...	B.K.	"Zippora"	from Buenos Ayres
"	10	...	S.S.	"Osiria"	from Hamburg
"	10	...	B.K.	"Sofia B."	from Chatham, N.B.
"	10	...	B.K.	"Nicolino"	from Buenos Ayres
"	11	...	S.S.	"Agathe"	from Riga
"	11	...	S.S.	"Gallina"	from Alexandria
"	12	...	S.S.	"Westbrook"	from Ghenitchesk
"	12	...	B.K.	"P. G. Blanchard"	from Hillsborough
"	13	...	B.K.	"Jolani"	from Buenos Ayres
"	13	...	S.S.	"Cairnloch"	from Soderhamm
"	13	...	Ketch	"Exportation"	from Havre
"	14	...	S.S.	"Bedford"	from Sulina
"	15	..	B.K.	"Gulmare"	from Shediak
"	15	..	Ketch	"Jane Arthur"	from Havre

July	17 ... S.S. "Firdene" from Archangel
"	17 ... S.S. "Clio" from Hamburg
"	18 ... S.S. "Echo" from Hamburg
"	21 ... S.S. "Hero" from Hamburg
"	23 ... S.S. "A. W. Kafemann" from Memel
"	24 ... S.S. "Ben Wyvis" from Archangel
"	24 ... S.S. "Thurston" from Taganrog
"	26 ... S.S. "Casco" from Rosario
"	27 ... S.S. "Mary" from Soroka
"	27 ... B.K. "Antonina" from Savannah
"	27 ... S.S. "Osiria" from Hamburg
"	31 ... Dandy "Fawn" from St. Brieux
August	5 ... S.S. "Clio" from Hamburg
"	6 ... S.S. "Hero" from Antwerp
"	6 ... S.S. "Wellfield" from Simo and Kemi
"	7 ... S.S. "Carl Hirschberg" from Archangel
"	7 ... S.S. "Incemore" from Ibrail
"	7 ... S.S. "Chatburn" from Nicolaieff
"	8 ... S.S. "Etruria" from New York
"	8 ... B.K. "N. S. Del Monte" from Dalhousie
"	8 ... Schooner "Walgalzeen" from Riga
"	8 ... B.K. "Ilera" from River Plate
"	9 ... S.S. "Echo" from Hamburg
"	10 ... S.S. "Springlok" from Gefle
"	11 ... S.S. "Nerissa" from Trondhjem
"	11 ... S.S. "Scoresby" from Archangel
"	11 ... S.S. "Beryl" from Luneau
"	12 ... S.S. "Graphic" from Archangel
"	13 ... S.S. "Glendale" from Soroka
"	13 ... S.S. "Salamanca" from Ibrail
"	14 ... S.S. "Harrogate" from Montreal
"	14 ... S.S. "Hamlet" from Gothenburg
"	15 ... S.S. "Iona" from Taganrog
"	15 ... S.S. "Osiria" from Hamburg
"	20 ... B.K. "Arizona" from Tarmentana
"	20 ... S.S. "Sunshine" from Onega
"	21 ... S.S. "Kopernicus" from Konigsburg
"	21 ... S.S. "Orfordness" from Roni and Kilia
"	22 ... Schooner "Marie Berthe" from Bordeaux
"	23 ... S.S. "Ayr" from St. John's
"	23 ... S.S. "Stelvio" from Sulina
"	23 ... B.K. "Adolf" from West Bay, N.B.

August	24	..	S.S.	"Hero"	from Antwerp
"	24	...	S.S.	"Eugenie"	from Nicolaieff
"	24	...	S.S.	"Clio"	from Hamburg
"	25	...	B.K.	"Robert Scafton"	from Villa Constitucion
"	27	...	S.S.	"Aros"	from Philadelphia
"	28	...	S.S.	"Firdene"	from Archangel
"	30	...	S.S.	"Echo"	from Hamburg
"	31	...	S.S.	"Beacon Rock"	from Hamburg
September	4	...	S.S.	"Tana"	from Rafso
"	4	...	S.S.	"Jason"	from Dantzic
"	5	...	Schooner	"Hematite"	from Treport
"	5	...	S.S.	"Oaklands"	from St. John's
"	5	...	B.K.	"Moel Eilian"	from Talcahuano
"	6	...	S.S.	"Hero"	from Antwerp
"	6	...	S.S.	"Nerma"	from Sundswall
"	6	...	S.S.	"Liffey"	from Novorossisk
"	7	..	S.S.	"Osiria"	from Hamburg
"	7	...	Ship	"Mathilda"	from Mobile
"	8	...	S.S.	"Cumberland"	from Riva De Sella
"	9	...	S.S.	"Duke of Cornwall"	from Ghenitchesk
"	11	...	S.S.	"Carl Hirschberg"	from Archangel
"	11	...	S.S.	"Emma"	from Parsboro
"	13	...	S.S.	"Tarragona"	from St. Pedro
"	14	...	S.S.	"Nordnaes"	from Rafso
"	14	...	S.S.	"Clio"	from Hamburg
"	15	...	Schooner	"Little Willie"	from Oporto
"	16	...	S.S.	"Manuka"	from Sundswall
"	18	..	S.S.	"Langham"	from St. John's
"	18	...	B.K.	"Gunn"	from Montreal
"	19	...	S.S.	"Munin"	from Rosario
"	19	...	B.K.	"Sea Breeze"	from Halifax
"	19	...	B.K.	"Kragow"	from Parsboro
"	19	...	S.S.	"Scoresby"	from Uleaborg
"	20	...	S.S.	"Ganges"	from Sulina
"	20	...	S.S.	"Newby"	from Philadelphia
"	20	...	S.S.	"Gladestry"	from Buenos Ayres
"	21	...	S.S.	"Topaze"	from Buenos Ayres
"	22	...	S.S.	"Brier Rose"	from Rouen
"	23	...	S.S.	"Cairnavon"	from Wyburg
"	23	...	S.S.	"Scramanga"	from Kertch
"	27	...	S.S.	"Ely"	from St. John's
"	28	...	S.S.	"Hero"	from Hamburg

October	3	...	S.S.	"Osiria"	from Hamburg
"	3	...	S.S.	"Helena"	from Gnarp
"	4	...	S.S.	"White Jacket"	from Philadelphia
"	4	...	S.S.	"Chatburn"	from Taganrog
"	5	...	Schooner	"Volunteer"	from Rouen
"	5	...	S.S.	"Romanby"	from Kemi
"	5	...	S.S.	"Clio"	from Hamburg
"	6	..	B.K.	"Ringhorne"	from Quebec
"	6	...	B.K.	"Hirdeorn"	from Chicontimi
"	7	...	B.K.	"Dunvegan"	from Dalhousie
"	10	...	S.S.	"John Marychurch"	from Archangel
"	10	...	S.S.	"Cairnglen"	from Uleaborg
"	11	...	S.S.	"Cairnross"	from Cronstadt
"	12	...	B.K.	"Flora"	from New Richmond
"	14	...	S.S.	"Echo"	from Hamburg
"	17	...	S.S.	"Walton"	from Gefle
"	18	..	S.S.	"Waltington"	from Kemi
"	18	...	S.S.	"Ladoga"	from Philadelphia
"	18	...	S.S.	"Nellie"	from Ghenitchesk
"	19	...	S.S.	"Duchess of Cornwall"	from Ghenitchesk
"	19	...	S.S.	"County"	from Nicolaieff
"	20	...	S.S.	"Hotspur"	from Pyterlex
"	21	...	S.S.	"Hero"	from Antwerp
"	22	...	S.S.	"Vale"	from Gefle
"	23	...	S.S.	"Harbinger"	from Nicolaieff
"	24	...	S.S.	"Isabel"	from Skutskur
"	24	..	B.K.	"Cato"	from Campbellton
"	25	...	S.S.	"Clio"	from Hamburg
"	25	...	Ketch	"Morning Star"	from St. Priene
"	25	...	B.K.	"Lord Baltemore"	from Soroka
"	26	...	Schooner	"Henry Harvey"	from Taviro
"	31	...	S.S.	"Osiria"	from Hamburg
November	2	...	S.S.	"Gardepee"	from Braila
"	2	...	S.S.	"Marie"	from Philadelphia
"	2	...	S.S.	"Everest"	from Nicolaieff
"	3	...	S.S.	"Echo"	from Hamburg
"	5	...	S.S.	"Bedford"	from Nicolaieff
"	6	...	S.S.	"Gena"	from St. John's
"	8	...	S.S.	"Pontypridd"	from Braila
"	8	...	S.S.	"Menensha"	from New York
"	8	...	S.S.	"Brenttor"	from Marianople
"	9	...	B.K.T.	"George"	from Riga

November 9	...	B.K.T.	"Anieberg"	from Groningen
„	10	...	S.S.	"Hero" from Hamburg
„	10	...	S.S.	"Scottish Hero" from La Plata
„	11	...	Schooner	"Morning Star" from Emden
„	11	...	Schooner	"Elizabeth Llewellyn" from Groningen
„	13	...	S.S.	"Clio" from Antwerp
„	13	...	B.K.T.	"Veritas" from Faro
„	15	...	B.K.	"Valkyrien" from Halifax
„	16	...	S.S.	"Meggie" from Kustendjie
„	16	..	S.S.	"South Wales" from Salonica
„	17	...	S.S.	"Marie" from Ghenitcheski
„	18	...	S.S.	"Nana" from Libau
„	19	..	S.S.	"Tafna" from Philadelphia
„	19	...	S.S.	"Franklin" from Ensenada
„	19	...	S.S.	"Osiria" from Hamburg
„	19	...	S.S.	"Fairmead" from La Plata
„	19	...	B.K.	"Angelsea" from Miramichi
„	20	...	Ship	"North Riding" from Newcastle, N.B.
„	20	...	Ship	"Marquerite" from Grand Pabos
„	20	..	Ship	"Marlborough" from Hopewell Cape
„	20	..	B.K.	"Arete" from Valparaiso
„	21	...	B.K.	"Lancefield" from St. John's
„	23	...	S.S.	"Justin" from Philadelphia
„	24	...	S.S.	"Echo" from Hamburg
„	25	...	S.S.	"Abchurch" from Skutskar
„	27	...	S.S.	"Hero" from Hamburg
„	30	...	B.K.T.	"Austra" from Riga
„	30	...	B.K.T.	"Fri" from Cape Tromentine
December 1	...	S.S.	"Thornaby" from Ghenitcheski	
„	1	...	S.S.	"Thomas Allen" from Sulina
„	3	..	S.S.	"Rannock" from Nicolaieff
„	3	...	S.S.	"Gallina" from Alexandria
„	3	...	Ship	"J. E. Graham" from Parsboro
„	4	...	S.S.	"Cento" from Salonica
„	5	...	S.S.	"Taurus" from La Plata
„	5	...	S.S.	"Acuba" from Theodocia
„	7	...	S.S.	"Westergate" from Marianople
„	9	...	Schooner	"Challenger" from Oporto
„	10	...	S.S.	"Secunda" from Libau
„	12	...	S.S.	"National" from Libau
„	13	...	B.K.T.	"Meteor" from Sommerside
„	14	...	Ketch	"Ravinala" from Rotterdam

December	17	...	S.S.	"Hero"	from Antwerp
	17	..	S.S.	"Clio"	from Hamburg
	17	..	S.S.	"Osiria"	from Hamburg
	20	..	S.S.	"City of Wakefield"	from Riga
	21	...	S.S.	"Saltram"	from New York
	22	...	Ship	"Hauger"	from Mobile
	22	...	S.S.	"Milton"	from Alexandria
	23	..	S.S.	"Bivouac"	from Hamburg
	24	...	S.S.	"Norma"	from Libau
	24	...	S.S.	"Springfield"	from Buenos Ayres
	25	...	S.S.	"Duchess of Cornwall"	from Nicolaieff
	31	..	S.S.	"David Mainland"	from Nicolaieff
	31	...	S.S.	"Mutual"	from Sulina
	31	..	B.K.	"Advokat Schiander"	

NUMBER OF VESSELS EXAMINED FROM JANUARY 1st
TO DECEMBER 31st, 1896 :—

Steamers	...	...	...	...	250
Sailing Vessels	...	...	..		97
					<u>347</u>
